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REVIEW OF THE GENERA *SMICROPLECTRUS* THOMSON, 1883 AND *EXYSTON* SCHIØDTE, 1839 (HYMENOPTERA: ICHNEUMONIDAE: TRYPHONINAE) OF SOUTH KOREA

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ABSTRACT

Two closely related genera, *Smicroplectrus* Thomson and *Exyston* Schiødte of the tribe Exenterini (Ichneumonidae, Tryphoninae) of South Korea are considered from collection of the Yeungnam University (YNU), Gyeongsan, Two species of *Smicroplectrus* were recorded before from Korea – *Smicroplectrus erosus* (Holmgren, 1857), and *S. quinquecinctus* (Gravenhorst, 1820) (Cha and Lee 1988). This material really includes 5 species of two genera of Exenterini: *Smicroplectrus pedicellatus* sp. nov., *S. melanocerus* sp. nov., *S. actenon* Kasparyan, 1976, *Exyston clementi* (Kerrich, 1952) and *E. sibiricus* (Kerrich, 1952). Three latter species are recorded for Korea for the first time. A new species, *S. pedicellatus* seems to be closely related to *S. irroratus* Kasparyan, 1990 from South of Russian Far East; both have pterostigma pale (brownish-yellow), and tergite 2 and 3 mainly smooth, with distinct punctures and without extensive scabrous sculpture typical of other species; by combination of two these characters both species can be distinguished from most other congeners. Unlike *S. irroratus* and *S. melanocerus* sp nov., in *S. pedicellatus* pedicel yellow ventrally and areolation of propodeum different. *S. melanocerus* is related to *S. modestus* Kasparyan, 1976 from Russia (Kunashir Island), but unlike to *S. modestus* has red coxae and apical half of antenna entirely blackish. Keys to species for both these genera occurring in South Korea are given. *Smicroplectrus erosus* (Holmgren, 1857) and *S. quinquecinctus* (Gravenhorst, 1820) are excluded from the South Korean fauna.

Key words: Hymenoptera, *Exyston*, Ichneumonidae, key, Khabarovsk Territory, new species, Russia, *Smicroplectrus*, South Korea, taxonomy, Tryphoninae

ОБЗОР ВИДОВ РОДОВ *SMICROPLECTRUS* THOMSON, 1883 И *EXYSTON* SCHIØDTE, 1839 (HYMENOPTERA: ICHNEUMONIDAE: TRYPHONINAE) КОРЕИ

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РЕЗЮМЕ

Два эволюционно близких рода трибы Exenterini (Ichneumonidae, Tryphoninae) – *Smicroplectrus* Thomson and *Exyston* Schiødte – Южной Кореи рассмотрены по материалам коллекции Yeungnam University (YNU),

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Gyeongsan [Йоннамский Университет, Кенсан], Два вида *Smicroplectrus* были указаны ранее для Кореи (Cha and Lee 1988): *Smicroplectrus erosus* (Holmgren, 1857) и *S. quinquecinctus* (Gravenhorst, 1820). В действительности этот материал включает 5 видов Exenterini, которые относятся к 2 родам трибы: *Smicroplectrus pedicellatus* sp. nov., *S. melanocerus* sp. nov., *S. actenon* Kasparyan, 1976, *Exyston clementi* (Kerrich, 1952) и *E. sibiricus* (Kerrich, 1952). Три последних вида отмечаются для Кореи впервые. Новый вид *S. pedicellatus* близко родственен *S. irroratus* Kasparyan, 1990, обитающему на юге Дальнего Востока России; для обоих видов характерна светлая (коричневато-желтая) птеростигма, а также более или менее гладкие тергиты с отчетливой пунктировкой и без характерной шероховатой скульптуры, которая типична для большинства других видов рода; по сочетанию этих двух признаков оба эти вида могут быть легко отделены от прочих. В отличие от *S. irroratus* и *S. melanocerus* sp nov., педицел *S. pedicellatus* снизу полностью желтый, и строение полей проподеума у него отличается. *S. melanocerus* во многом сходен с *S. modestus* Kasparyan, 1976 (Россия: о. Кунашир), но в отличие от *S. modestus* тазики у него красные, а апикальная половина усиков полностью черная. Для каждого из этих родов приведены определительные таблицы видов Кореи. *Smicroplectrus erosus* (Holmgren, 1857) and *S. quinquecinctus* (Gravenhorst, 1820) исключены из списка видов фауны Кореи.

Ключевые слова: Hymenoptera, *Exyston*, Ichneumonidae, определитель, Хабаровский край, новые виды, Россия, *Smicroplectrus*, Южная Корея, таксономия, Tryphoninae

INTRODUCTION

Closely related ichneumonids genera *Smicroplectrus* and *Exyston* belong to the tribe Exenterini (Tryphoninae). Palaearctic fauna of these genera includes about 35 species which were revised by senior author (Kasparyan 1975, 1976, 1990). Some later was published a review of Exenterini of Korea (Cha and Lee 1988; Lee and Cha 1996, 2000; Lee et al. 1995). This Korean material is deposited in Department of life Sciences, Yeungnam University (YNU), Gyeongsan, South Korea; at April 2014 material was revised by D.R. Kasparyan.

In the collection of YNU there are about 30 specimens from Korea incorrectly determined before as two West Palearctic species "*Smicroplectrus erosus* (Holmgren, 1857)" and "*S. quinquecinctus* (Gravenhorst 1820)". This material really includes 5 species of two genera of Exenterini: *Smicroplectrus pedicellatus* sp. nov., *S. melanocerus* sp. nov., *S. actenon* Kasparyan, 1976, *Exyston clementi* (Kerrich 1952) and *E. sibiricus* (Kerrich 1952). Three latter species are recorded for Korea for the first time. Thus two West Palaearctic species of *Smicroplectrus* (*S. erosus* and *S. quinquecinctus*) must be excluded from check list of Exenterini of Korea. The habitus and colouration of two *Exyston* species really are very similar to that of *Smicroplectrus* and both species were described originally in the last genus (Kerrich 1952). Differences between these two genera and between all Korean species are given below in a key.

MATERIAL AND METHODS

Holotypes of the new species and majority of paratypes are deposited in the Department of Life Sciences, Yeungnam University, Gyeongsan, South Korea (YNU); 4 paratypes – in the Zoological Institute RAS, Saint Petersburg, Russia (ZIN). Types of palaearctic species of genera *Smicroplectrus* and *Exyston* were studied (Kasparyan 1975, 1976, 1990). Additional material of many European Museums was examined including the Museum of Zoology of Moscow University (MSU). Taxonomy follows Henry Townes (Townes 1969) and the catalogue TaxaPad (Yu et al. 2012).

Photographs were taken with a DFC 290 digital camera attached to a Leica MZ16 stereomicroscope, and the partially focused images were combined using Helicon Focus software.

The following abbreviations are used for Provinces of South Korea: CB – Chungcheongbuk, GW – Gangwon-do, GB – Gyeongsangbuk-do, GN – Gyeongsangnam-do.

SYSTEMATICS

Family Ichneumonidae Latreille, 1802

Subfamily Tryphoninae Shuckard, 1840

Tribe Exenterini Förster, 1869 (=*Cteniscini* Thomson, 1883)

Tribe Exenterini comprising 14 genera and about 230 species in World fauna. All representatives of tribe differ from other Tryphoninae and all other Ich-

neumonidae by distinct autapomorphy – complete absence spurs on hind tibia and presence only one spur on mid tibia.

Genus *Smicroplectrus* Thomson, 1883

Type species: *Exenterus jucundus* Holmgren, 1857.

Kerrich 1952: 393 (revision of 8 Palaearctic species); Mason 1956: 124 (revision of 7 Nearctic species); Kasparyan 1976: 285; Kasparyan 1990: 102 (revision of 22 Palaearctic species); Yu et al. 2012 (catalogue).

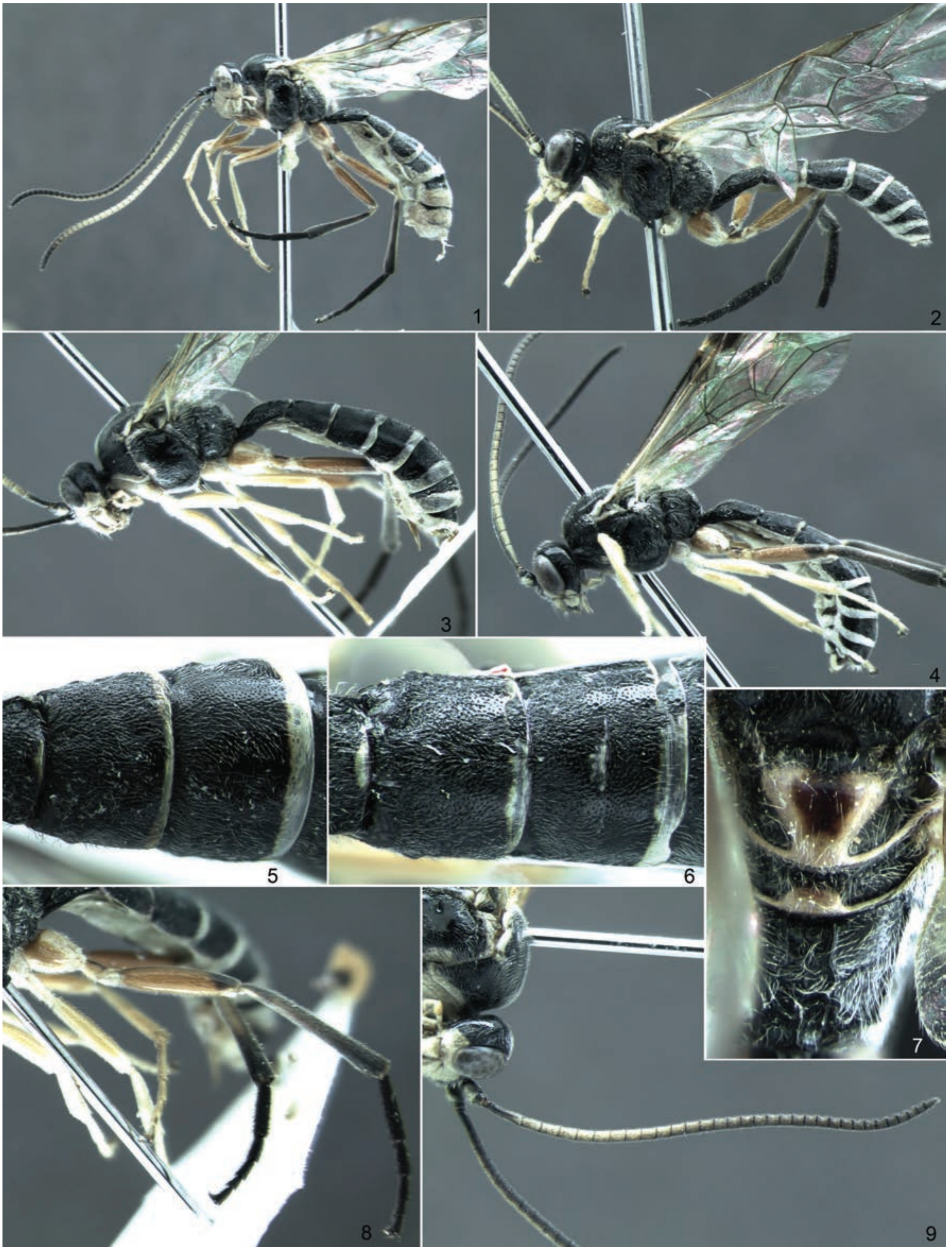
Smicroplectrus is a moderately large Holarctic genus with 4 Holarctic species, 7 Nearctic endemics (Mason 1956) and 20 Palaearctic endemics (Kasparyan 1976, 1990). The species are parasitoids of nematini-sawflies (Tenthredinidae) of genera *Amauronematus*, *Decanematus*, *Pteronidea* (all on *Salix*) and *Larinematus imperfectus* Zadd. (on *Larix*).

The genus may be easily distinguished by modification of subtegular ridge which developed into a lamella that projects upward to touch or almost touch lower lateral edge of tegula, and by presence small anteroventral tooth on apical margin of hind tibia (Townes 1969). Colouration is also typical of the genus. Body black with following whitish-yellow pattern (in female): scape below, face, often orbits of frons, clypeus and malar space completely, mandible (except for teeth), palpi, lower part of gena (lower part of temple), postgenae, propleron, anterior margin of lateral part of pronotum, its lower and hind corners, tegulae of front and hind wings, plates in base of wings, usually prepectus (except for fuscous impression beyond the fore coxa, subtegular edge of mesopleuron, apex of epimeron (or occasionally epimeron entirely), usually mesonotal flange beyond the tegula, apices of scutellum and postscutellum, spot at apex of tergite 1, hind margin of tergite 2 (sometimes in part), hind and lateral margins of subsequent tergites (these apico-lateral bands on apical tergites are very wide and usually occupy about half and more of visible part of tergites), all sternites (except for a pair dark lateral spots on each sternite), fore coxa, fore and middle trochanters and trochantelli and hind trochantellus. Femora, tibiae and tarsi of fore and middle legs pale rufous; hind coxa and trochanter reddish or black; hind femur usually red with blackish pattern before base and apex; hind tibia and tarsus usually blackish (from completely black to reddish brown); flagellum reddish yellow ventrally and blackish dorsally. Pterostigma usually blackish-brown with pale base. Male usually darker: face with a median triangular black spot below antennal sockets, gena only with small yellow marking just beyond base of mandible, yellow pattern of mesosoma reduced, whitish band on hind margins of tergite 5 and subsequent ones narrower. Here, in descriptions of the new species, only deviation from this type of colouration is given.

Smicroplectrus pedicellatus Kasparyan sp. nov.
(Figs 1, 2, 5, 7, 10, 13, 14)

Diagnosis. *Smicroplectrus pedicellatus* sp. nov. seems to be closely related to *S. irroratus* Kasparyan, 1990 (occurs in south of Russian Far East) in having pterostigma pale (brownish-yellow), and tergite 2 (and 3) mainly smooth, with distinct punctures and without in their basal 0.6 extensive scabrous sculpture typical of other congeners. Unlike *S. irroratus*, *S. pedicellatus* sp. nov. possesses antenna with 30–32 flagellomeres (28–29 flagellomeres in *S. irroratus*), pedicel yellow ventrally, epimeron only at apex distinctly yellow, propodeum entirely black (lateral carinae of apical area in *S. irroratus* yellow and very strong), its basal area wider and apical area usually smoother and with median longitudinal carina (compare Figs 10 and 12), tergite 1 rugose, without distinct punctures, its baso-lateral projection angular and black (baso-lateral projection rounded, broad and yellowish in *S. irroratus*); ovipositor straight (curved upward at apex in *S. irroratus*), ovarian egg larger and dark brown (Fig. 14). Differences *S. pedicellatus* sp. nov. from *S. melanocerus* sp. nov. are given in the key.

Description. Female. Fore wing 8.5 mm. Antenna with 32 flagellomeres. Inner eye orbits hardly divergent downward, distance between eyes on frons 0.9 times of distance at the level of clypeal foveae. Face at the middle about 0.6 times as wide as head and about as wide as mouth hollow. Malar space 0.4–0.5 times as long as basal width of mandible. Occipital carina sharp, raised as a low lobe at junction with hypostomal carina, joining with this carina almost at right angle. Oral carina as a low lobe; the depression distad of this carina slightly deeper close to occipital carina and extends as a short groove upward along occipital carina. Minimal length of gena about half as long as transverse diameter of eye. Lateral mesonotal flange 0.65–0.9 times as wide as tegula. Propodeum with



Figs 1–9. *Smicroplectrus pedicellatus* sp. nov. (1, 2, 5, 7) and *S. melanocerus* sp. nov. (3, 4, 6, 8, 9): 1, 3 – female (holotype), habitus, lateral view; 2, 4 – male (paratype), habitus, lateral view; 5–6 – metasomal tergites 2 and 3 of female; 7 – scutellum, postscutellum and propodeum, dorsal view; 8 – hind leg of female; 9 – antenna of female, ventral view.

basal area large, subquadrate; areola transverse, not separated by carina from basal area, its hind margin angularly penetrated in apical area; costulae divergent from posterior 0.35 of areola (Figs 7, 10). Hind basitarsus 6.0 times as long as wide; ratio of lengths of first to fifth segments of hind tarsus (*i. tars*) 9 : 3.9 : 2.7 : 1.3 : 2.5. Tergite 3 1.7 times as wide as its length at the level of spiracles. Ovipositor straight (lost), similar to that of *S. melanocerus* sp. nov. – Figs 3, 15).

Face and frons with coarse and dense punctures; temples with punctures moderately fine and sparse. Postgena with fine pubescence. Speculum large, polished, extending forward to anterior 0.6 of mesopleuron. Propodeum with moderately dense and long pubescence. Tergite 1 rugose, tergites 2 and 3 with distinct punctures, almost smooth (without fine scabrous sculpture typical most of congeners), and with weak rugosity in basal 0.2; subsequent tergites smoother and with punctures finer and sparse.

Colouration typical of genus. Antenna blackish dorsally, yellow ventrally, with 3–4 apical flagellomeres entirely blackish. Face yellow with a median triangular black spot below antennal sockets. Orbits of frons yellow only in its lower part (up to level of upper margins of antennal pits). Epimeron brownish with yellow apex. Scutellum yellow (except for reddish brown dorsal spot in base and blackish lateral sides in their lower half); postscutellum with yellow apex. Propodeum completely black. Hind coxa light red with ventral yellow spot; hind trochanter I brownish above and yellow ventrally; hind femur red with yellow apex and fuscous marking before apex; hind tibia blackish, in extreme base yellow and with black dorso-lateral spot before base. White apical band on tergites 5–6 at least 0.5 as long as dorsal length of tergite. Pterostigma brownish-yellow with brownish anterior margin.

Male. In main diagnostic characters male is similar to female: pedicel light yellow ventrally, pterostigma pale, punctures of tergites 1–4 distinct and dense, tergites 2 and 3 without fine scabrous sculpture, structure of propodeal areas is similar. Fore wing 6.2–8.2 mm. Antenna with 30–31 flagellomeres. Face at the middle 0.47–0.51 times as wide as head and about as wide as mouth hollow. Malar space 0.25–0.33 as long as basal width of mandible (about 0.5 – in female). Minimal length of gena about 0.4 times as long as transverse diameter of eye. Hind basitarsus shorter and thicker than in female, about 5.0 times as long as wide; *i. tars* 6.1 : 3.2 : 2.3 : 1.2 : 2.1. Tergite 1 about 1.5 times as long as wide apically, its dorsal longitudinal carinae reaching apical 0.75 of tergite; tergite 1 in basal half and between carinae more or less smooth, with isolated punctures, in apical half densely rugose-punctate. Tergite 2 with dense, distinct, moderately large punctures and with separate longitudinal wrinkles, in basal 0.25 with irregular rugosity, impunctate. Tergite 3 1.0–1.5 times as wide as its length on the level of spiracle. Tergites 3 and 4 smooth, evenly covered with distinct dense punctures (distances between punctures subequal to their own diameters); subsequent tergites smoother and with finer punctures. White apical bands on tergites 5–7 at most 0.2–0.3 as long as dorsal length of tergite.

Ovarian egg (Figs 13, 14) 1×0.5 mm, dark brown with yellowish thick petiole and dark discoidal anchor.

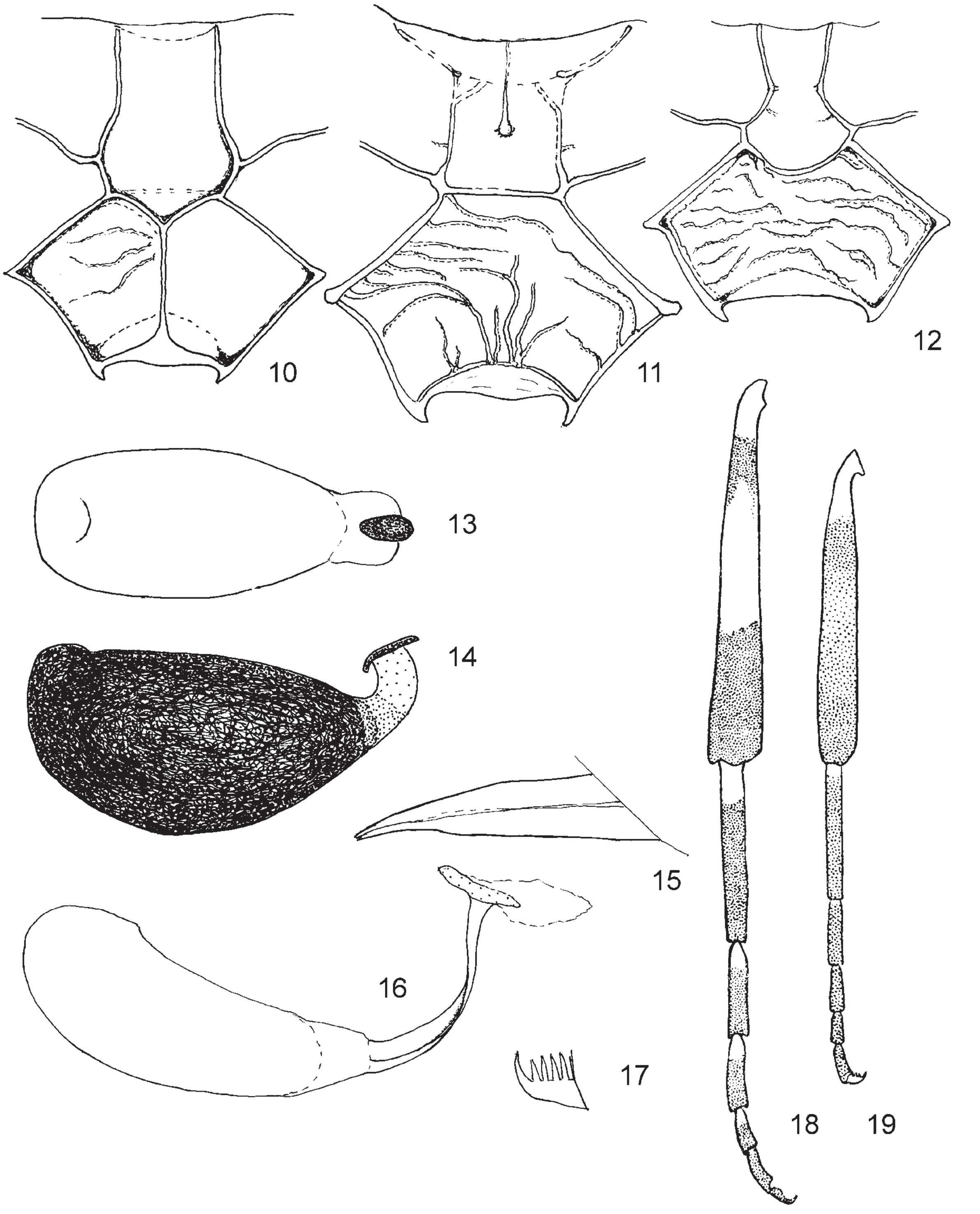
Material. Holotype. Female – SOUTH KOREA, GN, Myriang-si, Sannae-myeon, Samyang-ri, Mt. Gajisan, N 35°37´16´´, E 129°00´11´´, 26 May 2001 (J.-W. Lee) (YNU).

Paratypes. SOUTH KOREA, GN, Sancheong-gun Naeyeonsa, 3 May 1986, 1 male; Yanggu-gun, Mt. Daeam-san, 30 May 1992 (J.-W. Lee), males; Mt. Seorak-san, Temp. Baekdamsa, 3 June 1979, (J.Y Cha), 1 male; Mt. Taebaek-san, 23 June 1989 (J.Y. Cha), 1 male. Mt Hyangnobong (=Hangrobong), 13 May 1992 (S.M. Ryu), 2 males (YNU, ZIN). GW Yanggu-gun, Gachilbong, 31 May 1992 (J.-W. Lee), 1 male (ZIN). RUSSIA, Khabarovsk Territory, 15 km N of railway station Bikin, Shevki river, 2 June 1983 (Kasparyan), male (paratype of *S. irroratus*) (ZIN).

***Smicroplectrus melanocerus* Kasparyan sp. nov.**
(Figs 3, 4, 6, 8, 9, 11, 15–17)

Diagnosis. *Smicroplectrus melanocerus* sp. nov. is close to *S. nigricornis* Kasparyan, 1976 in having apical half of antenna entirely blackish; this peculiarity differs both species from most of congeners. It is similar also to *S. modestus* Kasparyan, 1976, but unlike to *S. modestus* has red coxae. *S. melanocerus* sp. nov. may be distinguished from both these species by smooth and distinctly punctured posterior half of tergite 2 and from *S. pedicellatus* sp. nov. in having pedicel and apical half of antenna blackish brown.

Description. Female (holotype). Fore wing length 9.0 mm. Antenna with 32–33 flagellomeres. Inner orbits of eyes hardly divergent downward, distance between eyes on frons 0.9 times of distance on



Figs 10–19. *Smicroplectrus* (10–17) and *Exyston* (18, 19): 10–12 – dorsal areas of propodeum (10 – *S. pedicellatus* sp. nov., 11 – *S. melanocerus* sp. nov., 12 – *S. irroratus* Kasparyan). 13, 14 – *S. pedicellatus* sp. nov., ovarian egg (13 – dorsal view, 14 – lateral view). 15–17 – *S. melanocerus* sp. nov. (15 –ovipositor, 16 – egg from ovipositor, 17 – hind tarsal claw). 18, 19 – hind tibia and tarsus (18 – *E. clementi* Kerrich, 19 – *E. sibiricus* Kerrich).

the level of clypeal foveae. Face at the middle about 0.6 times as wide as head and about as wide as mouth. Malar space 0.3 as long as basal width of mandible. Occipital carina sharp, but at the junction with hypostomal carina is elevated in the low lobe, and joins with this carina almost at a right angle. Oral carina as a low lobe; the area distad of this carina just beyond mandible is narrow, not depressed, slightly extending along occipital carina. The minimum length of gena is approximately half the transverse diameter of eye. Lateral mesonotal flange 0.75 times as wide as tegula. Propodeum distinctly areolated; basal area weakly bordered laterally, widely depressed anteriorly, not separated from areola, with longitudinal median carina (in holotype), almost subquadrate; costula divergents near hind corner of areola (Fig. 11). Hind basitarsus 5.5 times as long as wide; *i. tars* 8.5 : 4.3 : 3 : 1.6 : 2.7; hind tarsal claw with 5 high teeth (Fig. 17). Tergite 3 1.5 as wide as its length on the level of spiracle. Ovipositor straight (Fig. 16).

Face and frons covered with coarse and dense punctures; temples with punctures moderately coarse and rather sparse, distances between punctures are about 2–3 their diameter. Postgena with fine pubescence. Speculum large, polished, extends forward to anterior 0.65 of mesopleuron. Propodeum with moderately dense and long pubescence. Tergite 1 rugose, in apical 0.33 rugose-punctate, and in basal 0.67 polished between dorsal longitudinal carinae. Tergite 2 in basal 0.5 predominantly longitudinally rugose, and in apical half smooth with distinct sparse punctures. Tergite 3 predominantly smooth with irregular fine punctures, and in basal 0.2 scabrous without punctures. Tergite 4 evenly covered with distinct moderately fine punctures, distances between punctures 2–3 their diameters; subsequent tergites with punctures sparse and finer.

Colouration is typical of genus. Antenna blackish dorsally; scape yellow ventrally; pedicel dark brown; flagellomeres 2–12 yellow ventrally, subsequent about 12 flagellomeres from reddish-brown to dark brown, and apical ones entirely blackish. Fore margin of mesopleuron and epimeron entirely yellow. Scutellum yellow dorsally (except for triangle dorsobasal blackish spot); postscutellum with yellow apex. Propodeum black with small yellowish spot at apex of apophyses. Coxae yellow; hind coxa with large anterior and posterior basolateral light reddish spot; hind trochanter I brownish above and yellow ventrally; hind femur red with blackish apex (dorsally 0.25 of its length); hind tibia blackish in apical 0.4, dark brown in basal 0.6 (dark brown at base and light brown ventrally and at the middle). Pterostigma dark brown with basal 0.27 brownish-yellow.

Male. Fore wing about 8.0 mm. Antenna with about 30 flagellomeres. Main diagnostic characters of male similar that in female: apical half of antenna and pterostigma blackish brown, Tergites 2 and 3 with distinct punctures except for rugosity in basal 0.2. Colouration darker than in female: face with median longitudinal black line and black in upper 0.3, pronotum with an only small yellow spot in its lower corner, front margin of mesopleuron black, small basal yellowish spot of hind tibia darkened dorsally, white apical band on tergites 5–7 shorter, 0.15–0.25 as long as dorsal length of tergite. Parameres whitish with lateral brownish spot.

Egg (Fig. 16) 1.0×0.4 mm, brownish-yellow or yellowish.

Material examined. Holotype. Female – SOUTH KOREA, GW, Hongcheon-gun, Bukhang-myeon Gwangwon Prov., Enviroment Research Park, N 35°45´15.6´´, E 127°51´1.7´´, 15–30 May 2012, coll. S.J. Jang (YNU).

Paratypes. SOUTH KOREA: GN, Myriang-si, Sannae-myeon, Samyang-ri, Mt. Gajisan, N 35°37´16´´, E 129°00´11´´, 26 May 2001, coll. J.W. Lee, 1 male; CB, Boeun-gun, Songnisan-myeon, Sanae-ri, Mt. Songnisan Beopiusa, N 36°32´29.43´´, E 127°49´57.40´´, 12 May 2000, J.W. Lee, 1 male (YNU); GW, Hongcheon-gun, Gachilbong, 21–23 June 1984, coll. G.S. Choi, 1 male (ZIN).

Smicroplectrus actenon Kasparyan, 1976

Kasparyan 1976: 291, female, male; holotype: female, Russia, Buryatia, Orlik, ex *Larinematus imperfectus* Zadd., Larix, 10 VI 1962 (Verzhutzkij) (ZIN). Kasparyan 1990: 104, 105, 111 (key, figs 205–209, description, distribution). Kasparyan and Khalaim 2007: 360, 361 (key, figs).

Diagnosis. *Smicroplectrus actenon* differs from its congeners in having tarsal claws simple, without teeth, and hind tibia paler – blackish with whitish-yellow pattern at base and ventrally in central 0.3–0.5.

Material examined. RUSSIA (5 females, 1 male): Irkutsk Prov., Buryatia, Khabarovsk Territory (ZIN), Magadan Prov. (MSU). SOUTH KOREA: GW, Yanggu-gun Gachilbong, 31 May 1992, coll. J.W. Lee,

1 female (ZIN); (YNU 7 specimens), including: GW, Hangrobong (=Hyangnobong), 13 May 1992, coll. S.M. Ryu, 1 female; Gangwon-do, Wonju-si, Panbu-myeon, Seogok-ri, Mt. Baegunsan, from Yongsugoi to 1087 m peak, 8 May 2001 (C.-H. Park, D.S. Kang & O.-Y.Lim), 1 male (YNU) and 5 specimens more, determined as "*S. quinquecinctus*").

Key to species of *Smicroplectrus* occurring in South Korea

1. Tarsal claws simple. Hind tibia with apical spine strongly reduced; middle 0.5 on hind and ventral sides of tibia whitish or yellowish. Antenna with 27–29 flagellomeres (in specimens with fore wing 5.0–6.5 mm long). Oral and occipital carinae beyond mandible low, not raised in flange . . . . ***S. actenon* Kasparyan**
– Tarsal claws distinctly pectinate. Hind tibia with distinct apical spine, predominantly blackish, sometimes with yellow band at extreme base (Fig. 1). Antenna usually with 30–32 flagellomeres; fore wing 6.5–9.0 mm long. Oral carina as a low lobe 2
2. Tergites 2 and 3 mainly smooth, with distinct punctures and without extensive scabrous sculpture in basal half. Pterostigma pale (honey yellowish). Pedicel yellow ventrally. Flagellum blackish dorsally, yellow ventrally, with only 3–5 apical flagellomeres entirely blackish. Apical area of propodeum with median longitudinal carina and entirely black; basal area broad, its lateral carinae strong (Fig. 10). Ovipositor straight. [In closely related *S. irroratus* Kasparyan from south of the Russian Far East ovipositor is curved upward at apex, pedicel is blackish, propodeal areas are not as above (Fig. 12) and areas is usually with yellow pattern] . . . . ***S. pedicellatus* sp. nov.**
– Tergites 2 and 3 mainly with extensive scabrous sculpture in basal half. Pterostigma blackish brown. Pedicel completely blackish or dark brown. Flagellum in apical half completely blackish. Apical area of propodeum without distinct median longitudinal carina; basal area with anterior portions of lateral carinae obliterated (Fig. 11) . . . . ***S. melanocerus* sp. nov.**

Genus *Exyston* Schiødte, 1839

Type species: (*Ichneumon cinctulus* Gravenhorst, 1820) = *sponsorius* Fabricius 1781. Monobasic.

Kerrich 1952: 367 (revision of 9 Palaearctic species); Mason 1959: 1067 (revision of 20 Nearctic species); Kasparyan 1975: 294; Kasparyan 1990: 83 (revision of 12 Palaearctic species); Yu et al. 2012 (catalogue).

Exyston is a moderately large Holarctic genus with 20 Nearctic and 12 Palearctic species (Kasparyan 1990). The species are parasitoids of nematine-sawflies (Tenthredinidae) but unlike *Smicroplectrus* prefer the hosts from genera *Pachynematus* (on *Poacea*), *Metallus* (on *Rubus*), *Phyllocolpa* (on Salix) and *Pristiphora* (on *Tilia* and *Larix*), *Larinematus* and *Anoplonyx* (on *Larix*).

In South Korea, only two species are known – *E. clementi* Kerrich, 1952 and *E. sibiricus* Kerrich, 1952. Both are widely distributed, mainly in Siberia, but *E. clementi* originally was described from Alps where it attacks 4 species of larch sawflies (Zinnert 1969). These two species are convergently very similar to *Smicroplectrus* in colouration being described originally in this genus (Kerrich 1952).

Exyston clementi (Kerrich, 1952)

Kerrich 1952: 404, female [*Smicroplectrus*; holotype: female, Austria, "Carinth. alp. C. Boheman" (Mus. Stockholm)]. Kasparyan 1975: 302 (*Exyston*), 1999: 84, 93 (key, figs, description, distribution, hosts). Kasparyan and Khalaim 2007: 352 (key, figs).

Material examined. SOUTH KOREA, GB, Cheongdo-gun, Unmunsa, 14 May 1988, coll. J.Y. Cha, 1 specimen (YNU). ITALY, Valle d'Aosta, 1400 m (1 female, Mus. Turin). RUSSIA (9 specimens, ZIN): Irkutsk Prov., Transbaikalsky Terr., Amurskaya Prov., Khabarovsky Terr., MONGOLIA (1 specimen, ZIN).

Exyston sibiricus (Kerrich, 1952)

Kerrich 1952: 403, female [*Smicroplectrus*; holotype: female, Russia "Siberia, Eniseisk, J. Salberg" (Mus. Stockholm)]. Townes et al. 1965: 111 (*Exyston*). Kasparyan 1975: 304; 1999: 84–86, 99 (key, figs, description, distribution, hosts). Kasparyan and Khalaim 2007: 352 (key, figs).

Material examined. SOUTH KOREA (3 specimens, YNU): [GN] Miryang-si, Sannae-myeon, Samyang-ri, Mt. Gajisan, N 35°37´16´´, E 129°00´11´´, 25 May 2001, coll. J.W. Lee; [GB] Cheongdo-gun, Temp. Unmunsa, 24 May 1989, coll. J.Y. Cha; [GB] Pohang-si Buk-gu Jukjang-myeon 19 June 1993, coll. M.H. Jeong. RUSSIA (98 specimens) [ZIN]: Irkutsk Prov., Transbaikalsky Terr., Yakutia, Khabarovsk and Primorsky Terr., Sakhalin and Kunashir Islands, Kamchatka Terr. MONGOLIA (1 specimen, ZIN).

Exyston genalis Thomson, 1883

Lee et al. 1995: 4, "Korea; KN: Jinjushi, Kawajadong (1990.V.10, 1 F: YUK)"; Lee et Cha, 1996: 159 (Chinju-shi, Kajwadong).

Remarks. The material in YNU has not been found. Suppousedly the recording of *E. genals* from South Korea is erroneous. It is West-palaearctic species, distributed in Europe, Kazakhstan and Altai (Kasparyan 1990).

Key to species of *Exyston* occurring in South Korea

1. Occipital carina below the middle of temple (=gena) bifurcate, forming crenulated groove which extends to oral carina. Metasoma predominantly reddish; face, clypeus, fore and mid coxae and all trochanters yellow; femora red; hind tibia reddish brown, fuscous basally and sometimes also at apex; hind coxa varies from red to black .... ***E. genalis*** **Thomson, 1883**
– Occipital carina not bifurcated, joining to oral carina beyond the base of mandible. Metasoma blackish, tergites whitish on hind margin 2
2. Hind tibia with distinct whitish broad band at middle and narrow band in base; hind tarsal segments 1–3 whitish at base (Fig. 18). Hind tarsal claw simple, not pectinate. Occipital carina at the level of lower 0.4 of eye strongly bent forward (to eye), forming distinct flange to junction with oral carina. Antenna with 23–27 flagellomeres. Segment 3 of hind tarsus 1.4–1.5 times as long as tarsomere 5 .... ***E. clementi*** **(Kerrich, 1952)**
– Hind tibia brownish rufous without distinct whitish broad band at middle and with narrow yellowish spot at base; hind tarsus almost uniformly brownish, slightly paler at extreme base (Fig. 19). Hind tarsal claw sparsely pectinate. Occipital carina on genae straight, not raised as a flange, and below the eye sharply curved to oral carina. Antenna with 21–24 flagellomeres. Segment 3 of hind tarsus about 1.2 times as long as tarsomere 5 .... ***E. sibiricus*** **(Kerrich, 1952)**

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